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AUTHOR Sapon-Shevin, Mara
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ABSTRACT

Group contingencies structure situations which link individual behavior with group outcomes, attempting to change behavior through peer pressure. As such, group contingencies raise numerous methodological and ethical problems, and illuminate the relationship between what data is collected and what subsequent decisions can be made. Over 100 published group contingency studies were examined, with key points including: (1) although group contingencies use peer interaction to bring about change, less than half the studies cited reported social interaction or attempted to identify the type of peer pressure operating during the experimental procedure: (2) many of the group contingency studies collected only group data: (3) some group contingency studies are illustrative of potential conflicts between the role of the researcher and the role of the teacher: and (4) the language of group contingencies tends to legitimize their use without considering possible ill-effects. These issues serve to raise substantial questions concerning the advisability of using group contingencies in classrooms and stresses the need to monitor closely the social interactions which occur as a result of their implementation. (Author/BMW)

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THE ETHICS OF GROUP CONTINGENCIES

Mara Sapon-Shevin
Cleveland State University

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Introduction

Discussions of ethical issues in research and experimentation are often marked by much emotional content and little attention to scientific methodology. Similarly, discussions of methodology rarely concern themselves with ethical problems, other than the obligatory footnote which details how the rights of subjects were protected. Although every experimenter or researcher would probably like to be considered "ethical" and methodologically precise by colleagues, the relationships which exist between one's methodology and one's ethics are rarely if ever addressed.

It has been argued by some that choices concerning educational objectives and teaching goals are made within social, political, and ethical contexts, and that the selection of a specific objective begins a chain of methodological and evaluative processes that is affected at every step by the choice of the original objective. Macdonald and Clark (1973) in discussing an article by Kliebard (1970) state:

> The selection of a beginning point is a statement of values. If one makes the wrong assumption or expresses the wrong ideal at the beginning, no amount of technical or scientific technique can convert an error into a sound principle. What in effect takes place is that a personal bias or preserence is in operation under the guise of an objective and scientific determination (p.407).

Similarly, it has been acknowledged that evaluation also occurs within a value framework, that research in evaluation is not a neutral activity (Apple, 1974), and that evaluation as a mechanism has potential political impact in that it can contribute to changing power relationships (Cohen, 1970). But between the selection of an objective and the final evaluation of an educational activity, data is collected, and this data collection also occurs within social, political and ethical contexts. Choices regarding not only what data is collected but how it is collected are likely to circumscribe the subsequent evaluative questions asked, thus further embedding any final results or assessments within a social context.

Since the selection of an objective, data collection, and evaluation all occur within social contexts, the relationships between these procedures can become very complex. One's ability to collect meaningful data is limited in some ways by one's definition of the problem, and one's ability to make meaningful summative or evaluative conclusions is limited by the data one has collected. It becomes especially crucial to examine methodologies of educational research, in that, in some ways, these can be seen as being situated between the educational objectives specified, and the subsequent evaluation of the means to those objectives, and thus methodologies of research interact with two aspects of the research process subject to and a product of multiple social, political and ethical forces.

This paper will explore the relationships which exist between a specific educational methodology and the ethical decisions made concerning the advisability of such experimentation. Rather than examining these issues in their abstract form, this paper will focus on a specific area of research: group contingency studies which employ behavioral conceptions of data collection and reporting. Through the examination of one specific methodology, certain issues can be raised which extend beyond group contingencies to encompass broader questions regarding the ethics of educational methodologies in general.

Group Contingencies

A group contingency can be defined as a situation in which a single outcome for an entire group is dependent on the behavior of one or more members of the group. Group contingencies can be of the "dependent" type in which the outcome for the group depends on the behavior of one or more children (If Billy gets 100% on his spelling test the whole class will get a treat), or of the "interdependent" type (If everyone in the class gets 100% on his/her spelling test, then the whole class will get a treat). Group contingency studies have focused both on the establishment of desirable behaviors and on the "extinction" or "elimination" of undesirable behaviors and have used both positive and negative contingencies. Examples of studies which had as their objective the establishment or maintenance of a "desirable" behavior (one which the teacher of experimenter wished

to increase in frequency) include: Wilson and Williams (1973) in which the target behavior was the children's copying sentences accurately from the blackboard and McNamara (1971) in which the target behavior was getting materials prepared when asked by the teacher. Studies which focused on undesirable behaviors as their target behaviors were those in which the goal of the procedure was a decrease in frequency of some behavior deemed "undesirable" by the teacher or experimenter. Examples of this include: Greenberg and O'Donnell (1972) in which the goal of the experiment was to decrease the number of "talk-outs" and "out-of-seat" behaviors in a junior high class and Muller, Hasazi, Pierce and Hasazi (1975) which had as its objectives the elimination of loitering and running in the hall. A positive contingency is one in which the appearance of a strengthening subsequence or reward is made contingent either upon the display of a desirable behavior, or the non-occurrence of an undesirable behavior. Examples of studies which employed positive contingencies include: Wilson and Hopkins (1973) in which music was presented to the entire class contingent upon the maintenance of a low noise-level, Koch and Breyer (1974) in which points, redeemable for privileges and candy, were made contingent upon children's sitting in their seats and "paying attention," and Eleftherios, Shoudt and Strang (1972) in which two minutes of recess were earned for every four minutes in which no "out-of-seat" behavior occurred. A negative contingency can be described as one in which a strengthening subsequence or reward is

removed or diminished contingent upon the display of an "undesirable" behavior or the non-occurrence of a desirable behavior. Examples of negative contingencies include: Long and Williams (1973) in which students lost one minute of their scheduled 18-minute free time for every occurrence of a rule violation, Wolf, Giles and Hall (1968) in which students lost one point from their already earned points for every occurrence of out-of-seat behavior, and Grandy, Madsen and DeMersseman (1973) in which students lost their free time if the teacher observed any rule violation. Group contingencies have been applied to a broad range of populations: pre-school children (Bushell, Wrobel, and Michaelis, 1968; Herman and Tramontana, 1971), grade school children (Axelrod and Taluske, 1975; Barrish, Sanders and Wolf, 1969), junior high and high school students (Willis and Crowder, 1972; Wilson and Hopkins, 1973), mentally retarded children (Sulzbacher and Houser, 1968), delinquents (Graubard, 1969), and individual children in classroom settings (Evans and Oswalt, 1968; Rosenbaum, O'Leary and Jacob, 1975).

The target behaviors toward which group contingencies have been applied also vary; many studies have focused on school-appropriate noise level, and paying attention (Ascare and Axelrod, 1973; Packard, 1970; Schmidt and Ulrich, 1969). In addition to those contingencies which used loose labels such as "working appropriately," some studies have involved setting contingencies which specified a level of acceptable performance of academic work, such as math or spelling

(Harris and Sherman, 1973; Sloggett, 1971). Additional studies have had as their target behaviors some specific social behavior such as cooperation or peer tutoring (DeVries and Edwards, 1972; Walker and Hopps, 1973).

The use of group contingencies in the classroom is advocated for both practical and pedagogical reasons. Quay, Werry, McQueen and Sprague (1966) state:

> the economics of public schools obviously require the development of techniques that will allow children to be handled in a group situation by as few adults as possible. Most of the techniques of behavioral remediation have been developed for use on an individual basis and it seems crucial at this stage to attempt to extend these techniques to group situations . . . even if the techniques of behavioral remediation should prove to be highly effective when applied on an individual basis, they are likely to remain economically unfeasible, unless they can be adapted for use in a group setting such as the classroom (pp. 513-514).

The other prominent justification advanced in support of group contingencies is their use of peer influence and peer interaction in bringing about changes in student behavior. De Mersseman (1973) writes:

> Generally, a group contingency has three apparent advantages: (1) students are encouraged to consequate the behavior of their peers, (2) students are prevented from reinforcing the inappropriate

antics of their peers, and (3) the students are encouraged to set the occasion for appropriate behavior, for example, by leaving a student alone so that his attention time is not interrupted (pp. 49-50).

Givner and Graubard (1974) state similar support for this notion:

"students will begin to monitor their own behavior as well as the behavior of their peers. Those students having difficulty academically or socially will receive guidance from their peers (pp. 2-73)."

For the purposes of this paper, 70 major group contingency studies reported in the literature were read and analyzed. These studies are not seen as representing a thorough review of the literature, but rather were selected as a representative sample of the major thrusts in the field which can serve as a point of departure for a discussion of issues raised by these and similar studies.

Ethical Concerns

One way of looking at ethical concerns is as a set of questions which go beyond "Did it work?" Although an experiment might be "successful," there may be other social, political, or moral concerns which would lead one to abandon an experimental design or framework. The dictionary defines "ethics" as a concern for "right conduct," but that definition in and out of itself is clearly not sufficient as there are often competing claims for justice (Rawls, 1971), or, at least, competing claims for equal consideration. (Singer, 1975).

Because the studies of concern here involve children in schools, we must consider the possible incompatabilities and conflicts which arise between the interests of children and the interests of the teacher or experimenter. Additional concerns are raised by the fact that these studies treat children in groups; thus conflicts between "the good of the group" and "the good of the individual" also merit attention. Before one can attempt to answer the pragmatic question "Should this procedure be used again?" there are numerous prior questions.

This paper will show how the evaluative questions which one asks following an experimental procedure and even the researcher's ability to answer the question "Did it work?" are controlled or limited by the nature of the data collected during the experiment.

Fragmentation

In examining the data collection and reporting procedures utilized in group contingency studies, the central issue can be characterized as a problem of fragmentation. Research typically selects certain variables as being both of interest and accessible to the researcher. Few researchers would claim that the variables on which they have chosen to focus are the only possible ones which might have been chosen; and yet, it must be acknowledged that by choosing one's area of concern and by collecting data in only that area, one's conclusions must be similarly circumscribed, and evaluative questions with regard to the advisability or success of a procedure must be asked very cautiously.

There limitations on generalization must be observed when the efficacy and advisability of different procedures are compared.

In many of the group contingency studies reported, the dependent variable of interest to the researchers was one easily measurable and accessible, such as the number of arithmetic problems completed, spelling accuracy, or classroom noise level. These results were considered to be the "main effects" of the group contingency, and other data, such as the interpersonal behavior of the students was either totally unrecorded, unreported or mentioned casually in the discussion section of the experimental report. In more than thirty of the studies reviewed, no reference was made to the social interactions between children which were observed during the operation of the group contingency. Five studies of those reviewed made vague references to the effect that "peer pressure was observed to operate" but did not describe the precise nature of the interaction. Only twelve studies delineated to some degree the nature of the interaction; of these, five reported behaviors deemed "undesirable" (threat, crying), four reported positive peer interaction (tutoring, encouragement, applause), and three reported both positive and negative results.

The essence of the issue is in the determination of what is considered a "main effect" and what is considered a "side effect". This turns out to be less of a methodological decision and more of an ethical and political one.

Regarded as an ethical issue, there are overtones of irresponsibility in the application of group contingency procedures which rely on

undefined peer pressure to bring about changes in behavior without specifying and recording the precise nature of this interaction. Furthermore, this prominent omission of data also leads to serious questioning of the "success" reported in many of the studies. It is impossible to evaluate the relative efficacy of educational procedures without reference to results, and since many of the group contingency studies do not include reports of social behavior in their results, judgements of ease and economy become even more irrevelant, and potentially misleading. A study by Axelrod (1973) provides an example of this differential valuing of specific outcomes: the subjects in Axelrod's study were 30 students from two special education classes for the mentally retarded. The dependent variable was the frequency of individual undesirable behaviors, including "out-of-seat behaviors" and "disturbing others." Two distinct contingencies were instituted. During the group contingency phase, the numbers 25, 24, 23, . . . were written on the board. Following any undesirable behavior the teacher crossed off one number and wrote the responsible child's name next to the crossed-off number. At the end of the session, each member of the class received the number of tokens indicated by the highest number left. In other words, if four undesirable behaviors had been displayed each class member received 21 tokens.

During the individual contingency phase, the teacher wrote each child's name on the board followed by the numbers 25, 24, 23, . . . When a child misbehaved, the teacher crossed off one number from that child's list. At the end of the session, each child received the number of tokens left to him/her individually.

Axelrod reports that during the group contingency phase, fourteen verbal threats were recorded. A verbal threat was defined as "any statement by a student of an intention to punish another student for a deviant act" (p. 85). In all cases, the agreement between observers concerning the occurrence of a threat was 100 percent.

However, in discussing and comparing the results of the two procedures, Axelrod states:

> Since the individual and group contingencies were equally effective in controlling the specific behaviors under study, the decision as to which system has more utility in a classroom setting would seem to depend on other factors. The record-keeping procedures were simpler for the teacher during Group Contingency than during Individual Contingency. Since the entire class was treated as a unit during Group Contingency, the teacher only had to keep a single count of the undesirable behaviors. During the Individual Contingency, however, the teacher had to scan the board until she found the appropriate name and then record his undesirable act. This difference takes on additional import with large class sizes. The administration of the reinforcers was more convenient during Group Contingency than during Individual Contingency. During Group Contingency the teacher had only to count the number of tokens to be distributed once, rather than consulting each child's record and counting the number of tokens several times (p. 88).

It is sufficient to note here that taken at face value, the two procedures did not produce equivalent results, yet Axelrod's discussion begins by saying that individual and group contingencies are equally effective. The discussion of relative ease of administration and ease of application to the classroom, therefore, is irrelevant and misleading in that it tends to turn the reader's attention away from the specific results of the two procedures and towards an examination of the "ease" of the procedures. When the data collection in a study is limited to one aspect of classroom behavior, any statement as to the equivalency of two procedures must be extremely specific in stating precisely what was and what was not considered to be worthy of examination.

If it is absurd to consider as successful a treatment in which "the antibiotic knocked out the infection but the patient died of the side effects," then similarly fragmented evaluation and reporting of behavioral change should be regarded suspiciously. This kind of fragmentation, however, tends to dominate educational research. Because "basic" educational research does not deal with people as integrated, whole organisms, it becomes easy and logical for researchers to divide behavior, for example, into "academic" and "social." It then becomes possible to report on differential changes in various aspects of a person's behavior as if those divisions were other than arbitrary and describer-imposed. There is a clear difference between choosing to focus one's efforts or attention on one specific variable (clearly the role of the researcher) and drawing conclusions which extend these narrow results to blanket approval of a procedure. The relationship

between methodology and ethics becomes more and more clear: if one's methodology is crude, one's ability to make subsequent ethical decisions is limited. Because the information is lacking, some ethical decisions simply do not present themselves.

Children in Groups

Other significant issues are raised by the omission of certain kinds of information. The literature of the "hidden curriculum" has elaborated on the tacit messages carried by school curricula and patterns of management and interaction. Group contingencies clearly exist within political, social and value orientations. Some of these orientations have already been mentioned, for example, the valuing of academic performance or school appropriate behavior over social interaction between peers. Group contingencies are also advocated for reasons of "economy," a phrase mentioned both in terms of "handling children in a group rather than individually," and in terms of needing to buy and provide fewer rewards for appropriate behavior (De Mersseman, 1973).

Dealing with an entire group as though it represented a single organism presents methodological and ethical problems. In a report by Schmidt and Ulrich (1969) they preface their study by saying: "For purposes of this study, the entire class of 29 students was treated as a single responding organism (p. 172)." Litow and Pumroy (1975), however, in their review of group contingencies, acknowledge the difficulty in such an approach:

> In the research literature, the term "group contingencies" has generally been used to connote the application of operant techniques to the group behavior management of children in the classroom. However, the use of this term is erroneous if one takes the view that a group does not perform; individuals within the group perform (pp. 341-342).

Several tactical and pedagogical problems result from the presumption that it is possible to deal with a group as though it were the same as an individual. As pointed out in the quotation by Litow and Pumroy above, groups do not behave; individuals in groups behave. However, may of the studies referred to "group behavior," and gave "group evaluations" and "group ratings" as though there were indeed some actual behavior by a group. This issue is closely related to any discussion of social behaviors between children, as the specific contingencies of any particular situation control to a large extent the nature of the interaction between children. Although occasional studies described some target behavior which involved the mutually supportive interaction of more than one individual, the majority of experiments cited labeled as "group behavior" situations in which the tasks involved were clearly individual tasks. For example, in an experiment by Wilson and Williams (1973), the target behavior consisted of copying something from the board in 20 minutes or less with 6 or fewer mistakes. In this situation, each child had his/her own pencil, and his/her own paper, and the "rules" of the situation further specified that there was to

be no talking or interaction of any kind. Therefore, there was no approved way in which children could help one another or in any way have any control over another child's doing his or her work accurately or rapidly. Many of the other experiments cited also defined some task as a "group behavior" when the task was actually an individual behavior. In the experiment done by Fox, et. al. (1975) the target behavior was completing a math assignment accurately, and individually, and in Ascare and Axelrod (1973), the children could earn points by working quietly and alone on a given task. Similarly, in the many experiments in which a contingency centered on the collective "quiet" in the room, this may be seen as the product of individual behaviors (talking or being quiet), and not as a "group behavior."

In all of these cases, there is no system or mechanism provided for the children to exercise any control over the behavior of their peers throughout the duration of the contingency. Therefore, when a teacher or researcher speaks of "peer pressure" or "peer influence," he/she is describing a pressure or influence which cannot occur during the actual procedure. By removing the occasion for influence during the contingency itself, and yet allowing the occasion for peer interaction at other times of the day, the nature of the interaction between the children is likely to assume a form significantly different from what might be predicted <u>during</u> the contingency.

The collection and reporting of "group data" presents additional concerns. Many group contingency studies do not deal with group behavior at all, but rather record individual data in a group fashion for

administrative ease; this can have the effect of obscuring the behavior of individuals and of presenting the illusion that the figure given as an expression of group behavior actually represents more than a mathematical or statistical complation of scores. It can also be tempting to assume that group averages represent the behavior of each individual. Thus, conclusions as to effectiveness of group procedures which use group norms or averages can be misleading.

In a study by Axelrod and Paluska (1975) five children did better during the baseline than they did during the group contingency period, and yet the experiment was evaluated as being successful over-all. In a study by Koch and Breyer (1974) a group-oriented procedure was instituted in which the children were divided into groups and all members of a group had to be displaying desirable behaviors in order for the group to earn points. At the end of the day, each group which had met criterion received twenty minutes of free time. In discussing the results of the experiment, the authors report: "The use of a group contingency was successful" (p. 199). They then go on to say: "However, 3 of the 28 children did not respond to the program . . . Perhaps the shaping of certain responses for these children could be best accomplished with individual rather than group contingencies" (p. 199).

The juxtaposition in both of these experiments of the statement that "the contingency was successful" followed by a further statement of the effects of the program on various individual children

demonstrates the inadequacy of reporting data for an entire group as though they constituted a behavioral unit.

Some of the experiments reviewed also collected individual data in addition to group data, which would permit the subsequent assessment of changes in individual behavior; however, many of the experiments made no provision for collecting individual data, thus removing the possibility of making individual assessments.

Although this problem has been acknowledged in the literature, it is rarely reported in detail. Winnet and Vachon (1974) in their discussion of group contingencies state:

> "If group procedures were more efficient, it would still be important to monitor (at least to some extent) the progress of individual children. For example, it is possible that a class as a unit can change some particular behavior, but it would be undesirable for this change to occur mostly in the children who least need to change, e.g. were behaving well or doing good quality work before the intervention. Such an outcome might create even more problems in the classroom"(p. 1284).

From this author's perspective, the above statement greatly understates the case. Not only is it crucial to monitor the progress of individual children, it is the responsibility of the teacher to <u>arrange</u> for the progress of individual children.

Axelrod (1973) states that group contingency procedures can be used until such time as the undesirable "side-effects" become overwhelming,

at which time individual contingencies can be applied. De Mersseman (1973) is concerned with the same "undesirable side-effects" as those identified by Axelrod (1973), but nonetheless defends the group collection of data. She states:

> Individual reactions to experimental manipulations cannot be analyzed when data is reported as a group measure. Nonetheless, students who don't respond as desired to the contingencies will probably be quickly noticed by the teacher regardless of the nature of the data, especially as these students' behavior becomes proportionately more inappropriate than their peers (p. 16).

The notion that group data can be recorded because the teacher will "notice" the badly-performing individual, particularly as he gets "proportionately worse than his peers" must be considered to represent an unacceptable violation of ordinary professional standards. To deliberately institute a procedure which may provide the occasion for undesirable behavior, and at the same time, to obscure this result and thus decrease the speed with which this problem can be dealt with, represents a compounding of errors. For a teaching program to be considered fully responsible, it must not only insure the success of each individual, but must also collect data in such a way as to allow the teacher constant verification of this success.

Again, a relationship can be drawn between methodological rigor and the subsequent ethical judgements which are reached. If, as an ethical issue, the behavior of individuals is important, then failure to collect individual data makes difficult the possibility for assessing the

efficacy and/or desirability of a procedure.

The potential replication of studies is another ethical issue related to the way in which data is recorded and reported. The group contingency studies which are reported in newspapers, journals, and textbooks for teachers generally suffer from all of the weaknesses delineated in this paper, and from the additional problem of brevity. When a group contingency study is "explained" in two paragraphs, much of the additional, anecdotal recording is omitted. Teachers and practitioners, however, often read these abbreviated reports, and without any formal background or preparation, attempt to replicate the study described. The way in which the results of experiments of this type are described is therefore of paramount importance. Since the "mechanism of action" of group contingencies is acknowledged to be "peer pressure," it is surprising that in more than thirty of the group contingency studies reviewed, no reference was made to the social interactions between children which were observed during the operation of the group contingency. As most of the group contingency studies reviewed had as their target behavior some other behavior (math scores, staying in one's seat), and, as was noted, most of these studies made no reference at all to the social behaviors which occured between the children during the operation of these contingencies, this information (re: social behavior) is seldom part of any "popular" explanation of a group contingency study.

Role of the Teacher

The role of the teacher and the teacher's responsibility for arranging the environment for his/her pupils' success is threatened in other ways by group contingencies. The definition of a teacher used by this author is: ". . . one who accepts the responsibility for arranging and managing the environment in such a way that his/her pupils come to display new and desirable behaviors (Sapon, 1972a, p. 11)." Group contingencies, by definition and by design, allocate to other students in the classroom some of the controls previously exercised by the teacher. De Mersseman (1973), in her review of group contingencies, acknowledges this as one of the fundamental difficulties inherent in group contingency procedures. She states:

> The teacher, in turning consequation over to the students, relinquishes a great deal of control; it would be a difficult task to monitor the encouraging and discouraging remarks make by all students. Students' praise and disapproval is perhaps not as consistent and contingent as desired, and target behaviors may therefore resist control (p. 50).

After discussing the Schmidt and Ulrich study (1969) in which, under the control of the group contingency, the students made many threatening gestures to one another, De Mersseman goes on to state: "The purpose of a group contingency is not to save the teacher from performing her role as disciplinarian by turning punishment operations over to the students (p. 55)." However, that is precisely what was observed to

happen in many of the studies reviewed. Individuals (i.e. students) who are not charged with any professional responsibility for insuring the success of their classmates are nonetheless placed in potent positions in the classroom environment. Clearly, peer pressure has always been a force in classrooms and does not operate only when group contingencies are in effect, but the legitimization and specifiation of such pressure as part of an experimental procedure changes the nature of this interaction by providing legal sanction and support for such behavior. Ponder, for example, what happened to the child in the Axelrod (1973) study in which the teacher identified the child "responsible for the class' losing their reward so that the other students in the class could "consequate" his/her behavior. The technical jargon used by the experimenter in describing such a procedure should not impede the reader's visualization of the real events in the life of the real child who was "responsible for the class' loss."

Since we are concerned here with a functional analysis of group contingencies, that is, an evaluation of what actually happened under the control of various arrangements of the environment (by the teacher), then the occurrences of undesirable behaviors among children during the operation of group contingencies must be viewed as a <u>component</u> of group contingencies. Furthermore, many of these undesirable behaviors between children are predictable from the nature of the structure organized. Again, this represents the differential valuing of different outcomes; undesirable social behaviors between students were not considered to be sufficiently important to mitigate against future uses

of similar contingencies. Those studies which report, for example, "The procedure was successful, however, fourteen verbal threats were recorded," (Axelrod, 1973) might be changed to read "The procedure was judged to be unsuccessful in that fourteen verbal threats were recorded." This distinction is clearly one of values. And yet, those studies which do not collect any data in the area of social behavior obscure or eliminate the possibility for such an ethical stance to be taken.

Another ethical problem related to group contingencies which relates to notions of teacher responsibility can be described as "the undifferential strengthening or weakening of both desirable and undesirable behaviors" (Sapon, 1972b, p. 14 in Sapon et. al. 1976) which result from the application of group contingency procedures. Desirable behaviors may be weakened (decreased in probability) in those procedures in which one child's behavior is the occasion for a weakening subsequence or punishment for the whole class even though other children in class are behaving appropriately.

Several studies among those reviewed provided examples of this problem, and its conflict with notions of teacher-responsibility. In a study by Koch and Breyer (1974), the authors reported that "3 of the 28 children" involved in an experimental program did not respond to it. In a study by Lovitt, et al. (1969), the teacher initiated the following group contingency: On any given day that all students received 100 percent on their daily spelling tests, the total class would be allowed to listen to the radio for fifteen minutes. The authors report: "Although (the) group contingency was in effect throughout phase 3,

the class never was allowed to listen to the radio, since the pupils did not all submit perfect papers on any one day" (p. 155). This last phase was in effect for three weeks! In a study by Barrish, Sanders, and Wolf (1969), which used a group contingency called the "Good Behavior Game," the authors report that two of the students involved were so disruptive during the course of the game that they had to be eliminated from it. And, in a study by Evans and Oswalt (1968), in which early dismissal for the whole class was made contingent on one boy spelling a word right, the authors report, with no explanation, that the scores of the rest of the class went down.

All of these examples represent cases in which the procedure arranged by the teacher did not provide the occasion for success for all of the students in the class, or provided the occasion for a deterioration in performance. The use of procedures which do not provide the occasion for positive, desirable changes in the behavior of all students are suspect and should be abandoned as soon as this result becomes apparent. This last statement draws the relationship between teacher responsibility and methodology: the experimenter has an ethical, as well as a methodological, obligation to record and report data in such a way as to make possible the opportunity to monitor and make changes in the programs provided to students. If the teacher does not collect data in such a way as to be aware of changes in the behavior of individuals, then he/she cannot assume the responsibility for these changes.

The fact that many group contingencies provided for the success of

only some children at the expense of others, with the assumed presumption that not all children could succeed, can also be regarded as an ethical concern with economic dimensions. However, since group contingencies are looked upon as a technical solution to the "problem" of group management in schools, the ethical and political contexts of this technique are obscured. As Apple (1975) states:

> It should be made clear that curriculum design, the creating of educative environments in which students are to dwell, is inherently a political and moral process . . . the employment of systems procedures qua formula tends to obscure for the educator the fact that he is making profound ethical decisions about a group of other human beings. (p. 7).

Another ethical issue highlighted by the group contingency studies, but again not unique to them, is the possible (and sometimes inevitable) conflicts between the role of the researcher and the role of the teacher. Much educational research is characterized by the intrusion of an outsider into a classroom. The researcher's goals in the classroom are often significantly different from those of the teacher: to test a hypothesis, to demonstrate experimental control, to collect data, and (often) to publish an article. Teachers, however, are charged with the long-term responsibility for their students. In one group contingency study (Wilson and Williams, 1973) the researcher wished to undertake a "reversal" procedure in order to demonstrate experimental control, and did so over the protests of the classroom teacher who was pleased

by the improved functioning of her classroom.

As an ethical issue, this can, again, be related to methodological finesse and precision. Because human behavior is viewed by many as fragmentable, and because data is collected by researchers on only a few fragments, outside researchers are much less likely to be aware of their impact on the specific behavioral ecology of the classroom. A reversal is undertaken and then the experimental condition is reinstated; spelling scores rise again, in-seat behavior increases again in frequency, and the researcher concludes that he/she has left the classroom as he/she found it (or perhaps better). Teachers, however, as integral members of the classroom, may be aware of changes in areas not readily apparent to an outsider, areas outside those categories elaborated for data collection. Similarly, if teachers themselves lack a concern for or a method of assessing changes in classroom "climate," many changes (subtle and not so subtle) may be lost to them as well.

The Language of Group Contingencies

The language of group contingencies reveals another significant problem which can be described as couching existing methods and strategies within a scientific framework in order to legitimize them. This is a concern not unfamiliar to readers of behavior management research. While locking a child in a closet as punishment (if described as such) would be considered to be highly objectionable and unprofessional teacher behavior, when this same action is termed "time out from positive

reinforcement," a legitimization in the name of science is observed. Similarly, what used to be called "punishing the whole class because of one kid" (and was considered both to be unfair at best, and functional precisely because the other kids would certainly make their displeasure with the responsible child well known), is now refered to as a dependent group contingency (and, surprisingly, the fact that such procedures were often "effective" because of the subsequent peer pressure on the responsible child, is not reflected in the data recording.) The technique has not changed; only the name is different. This practice of legitimizing existing techniques or methods by labeling them as "scientific" can be seen as something of an Emperor's New Clothes Phenomenon. All of us see the same reality, but we have been urged to reinterpret this reality as representing a scientifically approved new method of classroom management.

The use of the term "hidden curriculum" to refer to some of these contexts within which group contingencies exist is in some ways inappropriate. When a group contingency is used, for example, to raise student spelling scores, and data is taken only on spelling scores, the fact that no data is taken on peer interaction makes social behavior less a part of the hidden curriculum, and more a part of the ignored curriculum. That is, such data remains hidden rather intentionally, and not merely through oversight. The data which is taken, and concurrently, that data not taken is a reflection of what is considered important. Not collecting data does not mean that the data not collected doesn't exist, it simply means that it is not considered necessary

or primary. This omission of data is sometimes justified by saying that data on social behavior is difficult to define, cumbersome to record, and unwieldy to report; this justification represents a value judgement in and of itself. This orientation has afflicted research for a long time; "we can't get at the really important data, so instead we'll record something easy to chart or to count." And this acknowledgement of a limitation is soon couched in further legitimization, i.e., "if it's not countable, it's not real data," etc. In the quest for "neat" data, crucial information may be lost simply because it is "messy."

It is neither possible nor desirable to conclude a discussion of ethical issues. What is important is to begin such a discussion. Ethical concerns must be introduced into all discussions of experimentation and methodology, and these concerns must be infused into each step of the research process. Group contingencies have been analyzed in terms of the greater social and ecological contexts in which they are used in schools, but it has become clear that many of the concerns which have been elaborated are not unique to one specific behavioral technique. Schooling, and thus educational research, exists in numerous contexts: social, political, economic and ethical. We must be concerned with all those methodologies and techniques which have obscured these considerations by claiming to be "scientific" and "interest free." (Apple, 1975). Our concern for being "good scientists" and "scientific" should not lead us to believe or accept that concerns for ethics are "soft" and not worthy of attention. Ethical concerns must

become more than the routine compliance with custom through the addition of a footnote at the end of every article detailing how the rights of subjects were protected. A concern for the greater contexts of schooling and the impact of educational research must be seen as integral to the research process itself.

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